US FPA RECORDS CENTER REGION 5



Monthly Oversight Report 64
44728 AES [46526 RAC]
ACS NPL Site
Griffith, Indiana
April 1, 2006 – May 5, 2006

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101 N. Wacker Drive

Black & Veatch Special Projects Corp.

Suite 1100

Chicago, Illinois 60606-7302

Tel: (312) 346-3775 Fax: (312) 346-4781

USEPA/AES

American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728 BVSPC File C.3 May 10, 2006

Mr. Kevin Adler U.S. Environmental Protection Agency 77 W. Jackson Boulevard (SR-6J) Chicago, Illinois 60604-3590

Subject:

Monthly Oversight Summary Report

No. 64 for April 2006

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 64 for April 2006 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

AUC

Larry M. Campbell, P. Site Manager

Enclosure

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# Monthly Oversight Summary Report No. 64 ACS Superfund Site TO 057, 44728.238 (AES) [WA57, 46526.238 (RAC)]

**Reporting Period:** Month of April (April 1 through May 5, 2006)

BVSPC O/S Dates: April 4, 7, 11, 12 and May 5, 2006 (Mr. Campbell and Mr. Gailey)

| Personnel Summary Affiliation         | No. of<br>Personnel | Responsibility                  |  |
|---------------------------------------|---------------------|---------------------------------|--|
| Montgomery Watson Harza               | 3                   | Respondent's General Contractor |  |
| U.S. Environmental Protection Agency  | 1                   | Federal Regulator Agency        |  |
| Black & Veatch Special Projects Corp. | 1                   | USEPA Oversight Contractor      |  |
| Austgen                               | 1                   | General Contractor              |  |
| ISOTED                                | 4                   | Chemox Injection Contractor     |  |
| PSA Environmental                     | 2                   | Drilling Contractor             |  |
| Walsh & Kelly                         | 2                   | Traffic Control Contractor      |  |
| Ryan                                  | 1                   | General Contractor              |  |

#### **Construction Activities**

## **Major Activities:**

- Montgomery Watson Harza continued operating the groundwater treatment plant, the insitu soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza replaced the two existing 10,000 gallon granular activated carbon tanks with two new smaller tanks holding only 3,000 pounds each.
- Montgomery Watson Harza, ISOTEC, PSA Environmental, and Walsh & Kelly conducted the fourth full-scale In-Situ Chemical Oxidation Treatment injections.
- Montgomery Watson Harza pumped product from well DPE-53.
- MWH conduct an internal Health & Safety audit for their operations at the site.
- MWH held the annual inspection open house for the Fire Department of Griffith.
- Montgomery Watson Harza held site operations & maintenance status meeting on May 5.

#### **Activities Performed:**

- Provided oversight of MWH's field activities on 4 days (April 4, 7, 11, and 12). Maintained contact with MWH site operations via telephone.
- Participated in 2 operation and maintenance (O&M) meetings at MWH's Chicago office (April 7 and May 5).
- Observed MWH continue to operate the groundwater treatment plant (GWTP) at a flow-demand rate of 19 gpm, treating 670,926 gallons during 588 of the 672 hours (88%) in

- the April period (March 31—April 28). MWH reported that groundwater was pumped to the plant from all trench and well sources. MWH reported that the GWTP continued operating, but in recirculation mode, during the change-out of the granular activated carbon (GAC) tanks.
- MWH reported that the GWTP was shut down for 12 hours on April 2 and 3 because of severe weather and a power outage. The GWTP was also shut down from April 16 through 18 because of failure of the sand filter pump.
- Observed the removal of the existing GAC from the two existing 10,000 gallon GAC tanks into a GAC vacuum tanker truck on April 11.
- Observed, on April 12, the removal from the GWTP building of the two existing 10,000 gallon GAC tanks and the associated backwash piping manifold. Also observed the loading of these tanks and piping manifold onto a truck for transport offsite for destruction.
- Observed the installation of two new smaller GAC tanks holding only 3,000 pounds of GAC each on April 12.
- MWH reported that the water level sensor alarm went off in the bio sludge tank due to a plug in the sand filter over the weekend on April 16. The GWTP was returned to automatic operation on April 18.
- MWH reported that it measured water levels in all monitoring locations on April 18 to 20 as part of the monthly monitoring plan.
- MWH reported that it replaced a pump at EW-11 on the barrier wall extraction system on April 19. This activity required performance of a permitted confined space entry, which was conducted in accordance with proper safety procedures. No incidents occurred.
- Observed MWH continue to operate the Onsite Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).
- MWH reported that it conducted the monthly compliance sampling of thermox 1 and 2 on April 13.
- MWH reported that thermox 1 operated for 474 of the 672 hours (71%) in the April period, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 29 ISVE wells in early April when air was injected through Group 2 wells (of the total 46). On April 21, when air injection was swiched to group 3 wells, vapors were collected from 31 wells.
- MWH reported that thermox 1 was shut down on April 2 and 3 due to severe storms and for scheduled maintenance on April 18 to 20.
- MWH reported that it was having difficulty sustaining the target chamber temperature in thermox 1. MWH reported that it is investigation the problem.
- MWH reported that thermox 2 operated for 561 of the 672 hours (83%) in the April period, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T-102.
- MWH reported that it serviced thermox 2 on April 3 and observed approximately 20 holes on the combustion chamber shell. MWH reported that it patched these holes and returned thermox 2 to operation.

- MWH reported that it pumped 8 gallons of free product from ISVE well SVE-53 in the SBPA on April 25. Product was collected in a drum at the surface and transported to the GWTP and transferred to oil holding tank T-6.
- MWH reported that in early April, air was being injected into the SBPA through Group 2 of five wells (SVE-49, -51, -65, -71, and -82), each flowing at about 20 cfm. MWH reported that air injection was switched to Group 3 wells (SVE-44, -59, -77, -80, and -84) on April 21. MWH reported that air will be injected using this Group 3 set of wells through late May.
- MWH reported that ISOTEC, PSA Environmental, and Walsh & Kelly mobilized to the site on April 3 to conduct the fourth full-scale in-situ chemical oxidation (ISCO) injection.
- Observed MWH conduct a kickoff health and safety meeting with the ISCO contractors on April 4. Observed ISOTEC and PSA inject modified Fenton's reagent, catalyst, and water in the target area of the South Area plume near the intersection of Colfax Street and Reder Road. MWH reported injecting chemicals into 160 locations beneath and on both shoulders of Colfax Street during the period April 4 through 10. PSA demobilized from the site on April 10, and ISOTEC, on April 11.
- MWH reported that it has confirmed with Mr. Howard Anderson's wife (local resident who had filed a noise complaint) that ME-103 noise-suppression has been completed (by activating the new ME-102).
- MWH reported that its corporate health and safety officer conducted an internal Health & Safety audit of the GWTP and the onsite and offsite ISVE system operations on April 19.
   The only safety audit concern was the missing protective dust caps on the eye wash station.
- MWH reported that it hosted the annual inspection open house for the Fire Department of Griffith on April 25. Thirty three firefighters participated with two fire trucks, two rescue units, and two additional support vehicles. MWH reviewed hazards at the site, confined spaces, and hazardous and flammable materials on site.
- MWH reported that it plans to replace the main 30 HP piston air compressor at the GWTP with a 40 HP rotary screw air compressor on May 15.
- Completed monthly oversight report (with field notes and photographs) for the March reporting period. Submitted Monthly Oversight Summary Report No. 64 to EPA on April 14.
- Site Manager provided periodic reports of field activities to the EPA TOPO via telephone and E-mail.
- MWH conducted the monthly O&M meeting at its Chicago office on May 5. BVSPC attended this meeting.

**Topics of Concern:** None

Concern Resolution: None

#### **Upcoming Activities:**

 MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.

- MWH to continue operating Group 3 air injection wells in the SBPA.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.
- MWH and PSA Environmental will conduct the post-application ISCO soil and groundwater sampling on May 9 through 12.
- MWH will remove the existing air compressor and install a replacement air compressor on May 15.
- MWH will continue construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

| Signature: | Chad Gailey | Date: May 12, 2006         | <u>.</u>           |
|------------|-------------|----------------------------|--------------------|
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# SITE STATUS MEETING MINUTES FOR MAY 5, 2006 MEETING AMERICAN CHEMICAL SERVICE, NPL SITE GRIFFITH, INDIANA

**MEETING DATE:** 

Friday, May 5, 2006

**MEETING TIME:** 

10:00 a.m.

MEETING LOCATION: MWH Chicago Office

ATTENDEES:

Chad Gailey – Black & Veatch

Prabhakar Kasarabada – IDEM (via phone)

Peter Vagt – MWH Todd Lewis – MWH Chris Daly – MWH

Lee Orosz – MWH (via phone)

David Powers – MWH Justin Finger – MWH

**TOPICS:** 

# **SITE STATUS**

# General Site Health and Safety

There have been no health and safety incidents since the last meeting held on April 7<sup>th</sup>. On April 11th, MWH began the process of replacing the carbon vessels in the Groundwater Treatment Plant (GWTP). A large vacuum truck was used to remove the carbon from the old vessels. On April 12<sup>th</sup>, both of the old 10,000 gallon vessels were removed from the GWTP using a crane. The new vessels were then installed. During these activities, appropriate health and safety procedures were followed and no incidents occurred.

On April 19<sup>th</sup>, MWH performed a confined space entry in barrier wall system extraction well EW-11 to replace the pump. Appropriate safety procedures were followed and no incidents occurred.

Also on April 19<sup>th</sup>, MWH's corporate health and safety officer conducted an audit the ACS site. The audit produced one comment regarding missing covers on the eye wash stations. MWH is in the processes of correcting this issue.

On April 25<sup>th</sup>, MWH conducted an informational session for members of the Griffith Volunteer Fire Department and allowed the Department to perform its annual inspection of the facility. Thirty-three members of the Volunteer Fire Department were present for the event. The session included a review of the hazards present at the site, including the location of confined spaces and the nature of flammable materials stored at the site.

Site Status Meeting Minutes

May 5, 2006 Meeting

ACS NPL Site

# Groundwater Treatment Plant (GWTP) Status

The GWTP operated 88 percent of the time from March 31 to April 28 (588 out of 672 hours). On the evening of April 2<sup>nd</sup>, the GWTP lost power. The plant was down approximately 12 hours until it resumed regular operation on Monday, April 3<sup>rd</sup>.

On April 12<sup>th</sup>, two new granular activated carbon (GAC) vessels were installed. The two existing vessels and GAC contained in them were removed from the GWTP on April 11<sup>th</sup>. During the change-out process, water was re-circulated throughout the plant until the pH of the new carbon was lowered to an appropriate level to treat the water. On April 15<sup>th</sup>, the GWTP resumed regular operations.

On April 16<sup>th</sup>, the pump associated with the sand filter malfunctioned causing the filter to plug. As a result, water backed up into the biotank, triggering an alarm and causing the plant to shut down. The problem was remedied and the GWTP resumed operation on April 18<sup>th</sup>.

A new air compressor to replace the existing main GWTP air compressor is scheduled to be installed in mid-May.

# Off-Site Area/SBPA ISVE Systems

The Off-Site Area ISVE System was operational for 83 percent of the time from March 31 to April 28, 2006 (561 out of 672 hours). All 42 ISVE wells and 3 air sparge wells are active.

The SBPA ISVE system was operational for 71 percent of the time from March 31 to April 28, 2006 (474 out of 672 hours). Air Injection Well Group 2 (SVE-49, SVE-51, SVE-65, SVE-71, and SVE-82) and associated ISVE wells were active until April 21<sup>st</sup>. On April 21<sup>st</sup>, operation was switched to Well Group 3 (SVE-44, SVE-59, SVE-77, SVE-80, and SVE-84).

The storms and subsequent power outage on April 2<sup>nd</sup> caused certain components on Thermal Oxidizer 1 (ThermOx 1) to malfunction. The appropriate repairs were made, and the system returned to service on April 3<sup>rd</sup>. It has been difficult to sustain the target chamber temperature in ThermOx 1. MWH is currently investigating the cause of this problem.

ThermOx 2 was serviced on Monday, April 3<sup>rd</sup>. While it was being serviced, approximately 20 holes were observed on the combustion chamber shell. All the holes were patched and ThermOx 2 resumed operation.

#### <u>Interaction with ACS Facility</u> and Community

Lee Orosz had a conversation with Tom Froman of ACS to discuss any issues that might exist with MWH's on-site activities. Tom stated that no problems were noted regarding the active treatment systems.

## Current Issues

The fourth round of chemical oxidation injection began on April 3<sup>rd</sup> and was completed on April 11<sup>th</sup>. MWH contracted PSA Environmental and Isotec to perform the work. Walsh & Kelly conducted traffic control. The total number of injection points at completion was 160.

Post-application sampling following the fourth round of chemical-oxidation injections is scheduled to take place May 9-12, 2006. MWH has subcontracted PSA Environmental to perform drilling activities. MWH will collect 12 soil samples and 12 water samples. Seven of the water samples will be collected through the drill rods of the direct push rig. The other five samples will be collected from temporary monitoring wells. The results from the sampling will be summarized in a forthcoming report.

# **LOOK AHEAD**

#### Field Events

- Chemical Oxidation Post-Application Sampling May 9-12, 2006
- ISVE System Monitoring May 24, 2006 (tentative)

# Reports

- Lower Aquifer Investigation Report May 2006
- Active Treatment Systems Quarterly Report, 1st Quarter 2006 May 2006
- Chemical Oxidation Fourth Full-Scale Application Report June 2006
- March 2006 Groundwater Monitoring Report June 2006

#### Health & Safety Look Ahead

- Proper forklift safety procedures should be followed during replacement of the compressor in the GWTP.
- Appropriate PPE should be worn and appropriate procedures should be followed
  while performing chemical oxidation post-application sampling. Special attention
  should be paid to traffic safety procedures.

# Future Meetings

Monthly Site Status Meeting - Friday, June 2, 2006, 10 a.m. at MWH's Chicago Office.

JEF/CAD/PJV

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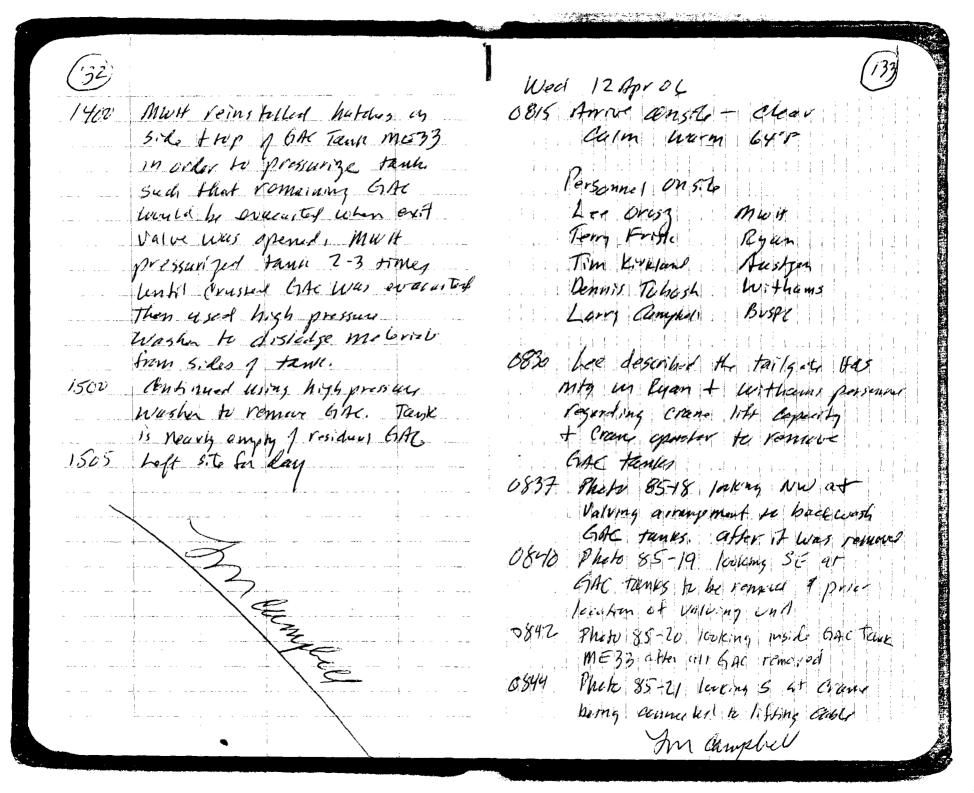
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American Chemical Service, Inc. Site: 44728 AES [46526 RAC] Proj. #:

Photo #9 Roll: 84

Time: 0839 Date: 4-04-06

Photographer: Larry Campbell

Description: Photo facing south showing work zone

signs set up before lane is closed ahead.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #10 Date: 4-04-06 Time: 0846 Photographer: Larry Campbell

Description: Photo facing south showing ISOTEC

setting up injection tanks, pumps and chemical drums on east side of Colfax

Ave.





Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #11
Date: 4-04-06 Time: 0847
Photographer: Larry Campbell

Description: Photo facing southwest showing

ISOTEC moving drums of hydrogen peroxide from the large tanker truck to

the work area.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #12 Date: 4-04-06 Time: 0850 Photographer: Larry Campbell

Description: Photo facing south showing Walsh &

Kelly placing traffic cones down center

of Colfax Ave. to divert traffic.





Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #13 Date: 4-04-06 Time: 0855 Photographer: Larry Campbell

Description: Photo facing north showing ISOTEC

adding catalyst powder to tank of water

to mix into solution.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #14
Date: 4-04-06 Time: 0902
Photographer: Larry Campbell

Description: Photo facing west showing ISOTEC

operating pumps to transfer hydrogen peroxide to tanks. Note staff wearing

splash protection head gear.



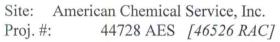


Photo #15 Roll: 84 Date: 4-04-06 Time: 0912 Photographer: Larry Campbell

Description: Photo facing south showing MWH

marking injection locations in roadway

of Colfax Ave.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #16 Date: 4-04-06 Time: 0915 Photographer: Larry Campbell

Description: Photo facing south showing PSA

Environmental drilling first hole through asphalt. Note flagger in

background.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]
Roll: 84 Photo #17

Date: 4-04-06 Time: 1037 Photographer: Larry Campbell

Description: Photo facing south showing four

injection points being injected with chemox solution. Note other injection points are installed to expedite operation.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

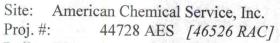
Roll: 84 Photo #18
Date: 4-04-06 Time: 1045
Photographer: Larry Campbell

Description: Photo facing east showing ISOTEC

transferring hydrogen peroxide from

tanker to drums.





Roll: 84 Photo #19
Date: 4-04-06 Time: 1415
Photographer: Larry Campbell

Description: Photo facing down showing sand used to

backfill the hole drilled through the

asphalt roadway.

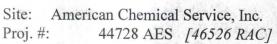


Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #20
Date: 4-04-06 Time: 1417
Photographer: Larry Campbell

Description: Photo facing north showing PSA patching hole in asphalt roadway.





Roll: 84 Photo #21
Date: 4-04-06 Time: 1529
Photographer: Larry Campbell

Description: Photo facing east showing Walks and

Kelly picking up traffic cones. Work in roadway is completed for the day. Now working in east shoulder of Colfax Ave.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #22
Date: 4-04-06 Time: 1538
Photographer: Larry Campbell

Description: Photo facing north showing traffic cones

placed while working on shoulder on

Colfax Avenue.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #23
Date: 4-04-06 Time: 1550
Photographer: Larry Campbell

Description: Photo facing north showing PSA

installing final injection rods for today. Will have injected 22 points today when

this point completed.



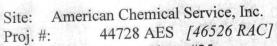
Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #24
Date: 4-07-06 Time: 0910
Photographer: Larry Campbell

Description: Photo facing south showing chemox

injection at 4 locations on shoulder and drilling through asphalt in Colfax Ave.





Roll: 84 Photo #25
Date: 4-07-06 Time: 0914
Photographer: Larry Campbell

Description: Photo facing north showing MWH

marking locations of chemox injection

points in Colfax Ave.



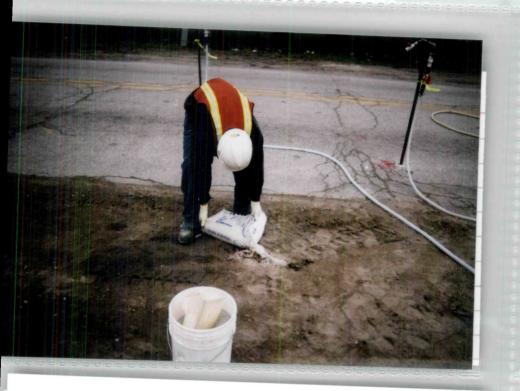
Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #26
Date: 4-07-06 Time: 0915
Photographer: Larry Campbell

I Description: PhotofacingsouthwestshowingISOTEC

chemox mixing and pumping station set

up in OFCA west of Colfax Ave.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC] Roll: 84

Photo #27 Date: 4-07-06 Time: 1122 Photographer: Larry Campbell

Description: Photo facing east showing PSA

backfilling injection point hole with sand.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 84 Photo #28 Date: 4-07-06 Time: 1127 Photographer: Larry Campbell

Description: Photo facing east showing ISOTEC connecting chemox manifold to injection

rod.



Site: American Chemical Service, Inc.
Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #1
Date: 4-11-06 Time: 0850
Photographer: Larry Campbell

Description: Photo facing north showing sandy locations at chemox injection points on

west shoulder of Colfax Ave.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #2
Date: 4-11-06 Time: 0851
Photographer: Larry Campbell

Description: Photo facing west into OFCA at location

where ISOTEC chemox staging and

mixing area had been located.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #3
Date: 4-11-06 Time: 0902
Photographer: Larry Campbell

Description: Photo facing south into GWTP showing

granular activated carbon (GAC) tanker truck and hoses. Note plastic sheeting to protect GWTP walls from carbon dust.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #4
Date: 4-11-06 Time: 0903
Photographer: Larry Campbell

Description: Photo facing southwest looking into

GAC tank ME34 (south tank) showing some remaining spent carbon in bottom of tank after most had been removed.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #5
Date: 4-11-06 Time: 0905
Photographer: Larry Campbell

Description: Photo looking inside GAC tank ME34

showing corrosion on wall of tank.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #6
Date: 4-11-06 Time: 0917
Photographer: Larry Campbell

Description: Photo looking into GAC tank ME34 after almost all GAC had been removed.



American Chemical Service, Inc. Site: Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #7 Date: 4-11-06 Time: 0930 Photographer: Larry Campbell

Description: Photo facing south showing Lee using

high pressure washer to remove solid

GAC from walls of tank ME34.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Roll: 85

Photo #8 Date: 4-11-06 Time: 0932 Photographer: Larry Campbell

Description: Photo facing up showing Weavertown Trucking technician closing hatches on truck. Note he is tied-off with fall

protection.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #9 Roll: 85

Time: 0948 Date: 4-11-06

Photographer: Larry Campbell Description: Photo (panorama 1 of 2) looking down

inside GAC tank ME34 after all GAC has

been removed.

Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

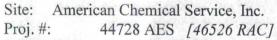
Photo #10 Roll: 85 Time: 0948 Date: 4-11-06

Photographer: Larry Campbell

Description: Photo (panorama 2 of 2) looking down inside GAC tank ME34 after all GAC has

been removed.





Roll: 85 Photo #11
Date: 4-11-06 Time: 0951
Photographer: Larry Campbell

Description: Photo facing east showing Weavertown

technician connecting evacuation hose to GAC tank ME33 (north tank). Black on

plastic is leaked carbon.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #12
Date: 4-11-06 Time: 1025
Photographer: Larry Campbell

Description: Photo facing south showing removal of

spent GAC from tank ME33.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Roll: 85 Photo #13 Date: 4-11-06 Time: 1110 Photographer: Larry Campbell

Description: Photo facing down into GAC tank ME33

showing water above GAC which is

about 3/4th full in tank



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #14 Roll: 85 Time: 1111 Date: 4-11-06

Photographer: Larry Campbell

Photo facing south showing seal plate for Description:

access to top of GAC tank ME33. Note

corrosion and attached carbon.



Roll: 85 Photo #15 Date: 4-11-06 Time: 1158

Photographer: Larry Campbell

Description: Photo facing down showing carbon-

crusted hatch for GAC tank ME34.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #16
Date: 4-11-06 Time: 1248
Photographer: Larry Campbell

Description: Photo facing into GAC tank ME33 after

most of GAS has been removed.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Roll: 85 Photo #17 Time: 1327 Date: 4-11-06 Photographer: Larry Campbell

Description: Photo facing south showing Lee adding

water to ME33 to dislodge remaining

GAC.

American Chemical Service, Inc. 44728 AES [46526 RAC] Site: Proj. #:

Photo #18 Roll: 85 Time: 0837 Date: 4-12-06 Photographer: Larry Campbell

Photo facing northwest showing valving Description:

arrangement to backwash GAC tanks, after it was removed from GWTP.



American Chemical Service, Inc. Site: 44728 AES [46526 RAC] Proj. #:

Photo #19 Roll: 85 Time: 0840 Date: 4-12-06

Photographer: Larry Campbell

Description: Photo facing southeast showing GAC

tanks to be removed (and prior location

of valving unit).



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #20 Date: 4-12-06 Time: 0842 Photographer: Larry Campbell

Description: Photo facing into GAC tank ME33 after

all GAC had been removed.

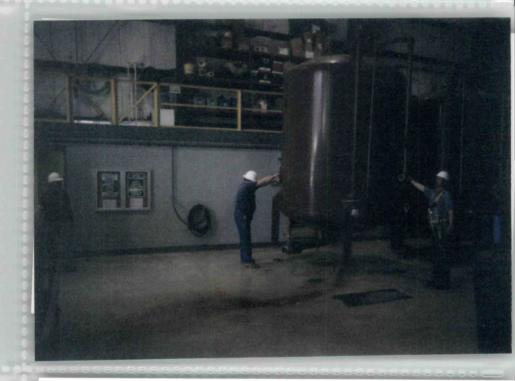


Photo #21 Date: 4-12-06 Time: 0844 Photographer: Larry Campbell

Description: Photo facing south showing crane being

connected to lifting cable to remove tank ME33. Note Tim is tied-off with fall

protection



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #22 Roll: 85 Date: 4-12-06 Time: 0847 Photographer: Larry Campbell

Description: Photo facing southeast showing tank

ME33 lifted off the floor.



Roll: 85 Photo #23
Date: 4-12-06 Time: 0850
Photographer: Larry Campbell

Description: Photo facing southeast at rear truck tires

on crane, showing front outrigger in

place.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

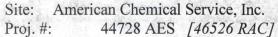
Roll: 85 Photo #24
Date: 4-12-06 Time: 0903
Photographer: Larry Campbell

Description: Photo facing northwest showing tank

reconnected with chain (rather than cable sling) because of height limitations in

building.





Roll: 85 Photo #25
Date: 4-12-06 Time: 0923
Photographer: Larry Campbell

Description: Photo facing north showing crane

backing out of GWTP with ME33.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 85 Photo #26
Date: 4-12-06 Time: 0925
Photographer: Larry Campbell

Description: Photo facing northwest showing tank

ME33 being tipped onto its side.





Roll: 85 Photo #27
Date: 4-12-06 Time: 0930
Photographer: Larry Campbell

Description: Photo facing southwest showing ME33

located on its side.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

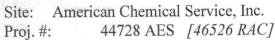
Roll: 86 Photo #1
Date: 4-12-06 Time: 1013
Photographer: Larry Campbell

Description: Photo facing southeast showing ME34

being moved out of it prior location. Note the short hookup because of

overhead heater.





Roll: 86 Photo #2
Date: 4-12-06 Time: 1015
Photographer: Larry Campbell

Description: Photo facing north showing tank ME34

being moved out of GWTP.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

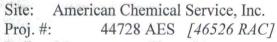
Roll: 86 Photo #3
Date: 4-12-06 Time: 1016
Photographer: Larry Campbell

Description: Photo facing north showing minimal

boom clearance as ME34 is moved

outside of GWTP.





Roll: 86 Photo #4

Date: 4-12-06 Time: 1029

Photographer: Larry Campbell

Description: Photo facing south showing ME33

being placed on low-boy truck.



Site: American Chemical Service, Inc. Proj. #: 44728 AFS 146526 PAG

Proj. #: 44728 AES [46526 RAC]
Roll: 86 Photo #5

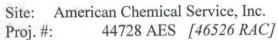
Date: 4-12-06 Time: 1044

Photographer: Larry Campbell

Description: Photo facing west showing ME34 being

tipped onto its side.





Roll: 86 Photo #6
Date: 4-12-06 Time: 1058
Photographer: Larry Campbell

Description: Photo facing west showing tank ME34

being loaded onto low-boy truck.

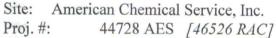


Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 86 Photo #7
Date: 4-12-06 Time: 1104
Photographer: Larry Campbell

Description: Photo facing northwest showing longreach pickup of piping valve unit.





Roll: 86 Photo #8

Date: 4-12-06 Time: 1106

Photographer: Larry Campbell

Description: Photo facing west showing placement

of piping valve unit on truck.



Proj. #: 44728 AES [46526 RAC]

Roll: 86 Photo #9

Date: 4-12-06 Time: 1108

Photographer: Larry Campbell

Description: Photo facing north showing new 3000

pound GAC tanks on delivery truck.





Roll: 86 Photo #10
Date: 4-12-06 Time: 1117
Photographer: Larry Campbell

Description: Photo facing northeast showing Lee

removing GAC tank from delivery truck

using fork lift.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 86 Photo #11
Date: 4-12-06 Time: 1122
Photographer: Larry Campbell

Description: Photo facing south showing truck loaded

with old GAC tanks.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #12 Roll: 86 Time: 1124 Date: 4-12-06

Photographer: Larry Campbell

Description: Photo facing west showing new GAC

tank being moved into GWTP.



Site: American Chemical Service, Inc.

44728 AES [46526 RAC] Roll: 86

Photo #13 Date: 4-12-06 Time: 1127 Photographer: Larry Campbell

Description: Photo facing north showing new GAC tank being moved into GWTP



Roll: 86 Photo #14
Date: 4-12-06 Time: 1134
Photographer: Larry Campbell

Description: Photo facing south showing second new

GAC tank being moved into position.

Photo did not develop.

Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 86 Photo #15
Date: 4-12-06 Time: 1244
Photographer: Larry Campbell

Description: Photo facing south showing new GAC

tanks in place in GWTP



Roll: 86 Photo #16 Date: 4-12-06 Time: 1245 Photographer: Larry Campbell

Description: Photo facing southwest showing Lee

measuring for new hoses to connect the

new GAC tanks.